DRAFT

Outline of Contents
ASSUMPTIONS AND ESTIMATES DOCUMENT
September 7, 2001

I. Introduction

A. Purpose of this report.
- required by provisions added to the California Water Code in year 2000, as a preliminary step in the development of the next California Water Plan Update.
- concept is to present all available information to the public, regarding the assumptions and data that will be developed for the next CWPU.
  - report process will include public review and comment.

II. Collaborative Process For CWPU in 2003.

A. Describe the new collaborative process, and the expanded role of the public Advisory Committee.
- outline process utilized to develop primary CWPU assumptions.
- outline the process proposed to generate and document all data.

III. Assumptions For Where We Are Now.

A. Overview of the recommended process for representing current conditions, as developed with Advisory Committee consensus.

B. Use of Water Portfolio concept as a comprehensive water supply and usage balance for each hydrologic region (see Table 1).
- four elements of the Portfolio:
  - water flow diagram
  - water balance categories
  - narratives to explain the categories
  - data tables and supplemental information
- Development of data and assumptions at regional and local levels, to the extent data available. Summation by hydrologic regions for presentation in CWPU.
- Actual data from recent years will be used with no statistical normalization.
  1998 data for Wet year water balances.
  2000 data for Normal year water balances.
  2001 data for Dry/Critical year water balances (to extent that data will be available within time schedule).

C. Report will include information on all categories specified by the California Water Code (see Appendix A). Provisions now state that this report shall release, at a minimum, assumptions and other estimates relating to:
   - Basin hydrology
   - Groundwater supplies
   - Land use patterns
   - Environmental water needs
   - Current population information
   - Urban water use, specified by six sub-categories,
   - Evapotranspiration rates for crop types
   - Status of urban and agricultural conservation practices
   - Water provided by water recycling and reuse.

   Will include a discussion of the potential for "alternative water pricing policies"

   to change current and projected water uses for all of the categories listed above.

D. Discuss utilizing the concepts of "process mapping" and "data mapping" as methods to (1) document the assumptions and preparation process for the full CWPU, and (2) make available all basic data with supporting documentation.
   - Concept and purpose of Process Mapping.
     - generally described as a <u>flow-chart mapping activity</u> that is designed to show a process graphically.
     - can include embedded layers that contain more detailed information about each component in the process.
     - can also include a glossary of standard terminology.
   - The process map would be ***<u>included</u>*** as a part of the required Assumptions and Estimates document.
   - The process map would also become the documentation of all components for preparation of the CWPU; which would be used as a basis for preparation of subsequent California Water Plan Updates.

TABLE 1

California Water Code Categories
For Inclusion in the Assumptions & Estimates Document

Water Code Category	Current Data	Projected Data
1. Basin Hydrology - annual rainfall, unimpaired streamflow, depletions, consumptive uses.	X	
2. Ground Water Supplies - sustainable yield estimates, overdraft recovery needs, supplies lost to GW pollution.	X	
3. Land Use Patterns - residential, commercial, industrial, agricultural, and undeveloped lands.	X	X
4. Environmental Water Needs - regulated instream flow requirements, nonregulated instream flows, wetlands and refuge needs, managed natural resource lands, and unmanaged natural resource lands.	X	
5. Population	X	X
6. Urban Water Needs - interior uses, single family dwelling - exterior uses, single family dwelling - multi-family dwelling, all usage - commercial water usage - industrial water usage - parks & open space usage	X	X
7. Evapo-transpiration Rates for Crops - evaporative losses by irrigation practice, and evaporation impact on transpiration.	X	
8a. Adoption of Urban Conservation Practices	X	X
8b. Adoption of Ag. Conservation Practices	X	X
9. Water Supplies from Recycling & Reuse	X	X

IV. Assumptions For Where We Are Going - Future Study Plans.

A. Consensus Process with Advisory Committee for development of future Study plans.
   - consider factors and important criteria.
   - identify building blocks with qualitative ranges for consideration.
   - develop a matrix of possible factors and criteria, from which study plans can be formulated.
   - develop a specific number of alternative study plans, using combinations developed from the above matrix.
   - evaluate selected study plans using agreed upon models, data, trend analysis and other appropriate methods.

B. Selection of future planning horizons – through consensus with the Advisory Committee.
   - four proposed horizons are years: 2010, 2020, 2030 and 2050.
   - Year 2050 to be described only qualitatively, without detailed water balances.

C. Use of models for future projections, and other trend analysis procedures.
   - Available models are briefly summarized in Appendix C. The selection of which models will be used (and which regions of the State) will be discussed with the Advisory Committee to develop consensus.

D. Information categories for future projections that are specified by Water Code provisions (see Appendix A) include:
   - Land use patterns
   - Projected populations
   - Projected (Urban) water use, separated by six sub-categories
   - Discussion of future use of urban and agricultural conservation practices
   - Projected water provided by water recycling and reuse.

   - will also include a discussion of the potential for "<u>alternative water pricing policies</u>" to change projected water uses for all of the categories listed above.

E. Other Assumptions related to the development of information for the CWPU.
   - document methods and criteria for data development related to future water supply and demand options (recycling, conservation, water marketing, desalination, ground water conjunctive use, development of new facilities, etc.)
   - future planned local and regional projects: describe process for developing information about feasible projects for consideration in the next CWPU.

V. Potential Effects of Climate Change – Year 2050.

The Assumptions Report will include information about:

- the various research groups studying this topic.
- the process used to determine which climate change projections are appropriate for discussion in the CWPU (as well as why various other research projections are not used).
- also explain that year 2050 is qualitative analysis only – will not make detailed projections of supplies and demands.

VI. Next Steps

A. describe process for how this Assumptions & Estimates Report will be used in development of Draft and Final CWPU-2003.
   - Revisions and changes in assumptions incorporated.
   - Assumptions report to be included as part of the full CWPU.

VII. Appendices

A. Provisions from the California Water Code.
B. Documentation for IDEF0 and IGRAF Process Mapping Tools.

C. Documentation for computer models used to evaluate future scenarios. (CALSIM, IRW-MAIN, CALAG, LCPSIM, CVGSM, possibly CALVIN, and any others that are considered).